

目 次

技术综述

- 回转窑处理固体废弃物的研究进展 王广伟, 刘嘉雯, 李仁国, 徐坤, 宁晓钧, 王川 1
碲处理控制钢中硫化锰夹杂物综述 周全磊, 杨文, 张立峰 8

专题研究

- MgO 含量对高铝铁矿球团强度的影响 刘桐, 李兴旺, 张俊杰, 贾来辉, 雷杰, 龙红明 17
高钙烟煤主要特性及高炉喷吹工艺性能综合评价 郭豪, 李燕江, 胡启晨, 索延帅, 乔军强, 张建良 24
小颗粒石灰石快速煅烧高效脱磷试验 李晨晓, 张昀, 薛月凯, 孙华康, 张凯璇, 孟鑫, 沈浩杰 34
Fe-Mn-Al-C 低密度钢中的脱氧合金化夹杂物 曹磊, 郭宇航, 王国承, 尚德礼 42
时效处理工艺对海工用高氮不锈钢耐蚀性的影响 刘吉猛, 李皓, 王书桓, 赵定国, 倪国龙 50

生产技术

- 球团矿还原膨胀率影响因素分析 赵路遥, 田筠清, 赵满祥, 刘长江, 余晓波, 韩英广 60
耗散型浸入式水口对 1270 mm×150 mm 板坯结晶器流场优化 王杨, 马党参, 杨卯生, 李京社, 杨树峰 65
大型转炉超深脱磷新技术研究与应用 吕延春, 周德光, 朱国森, 朱志远, 王国连, 李海波, 刘洋 73
真空感应熔炼法高效制备 SmFe₁₂ 基永磁体母合金 王婉婷, 王书桓, 柳昆, 张一昆 81
MCCR 高拉速薄板坯连铸氢致漏钢机理及控制 张聪聪, 罗衍昭, 王胜东, 季晨曦, 董文亮, 王皓 90
2507 超级双相不锈钢板坯修磨过程脆断分析及控制 陈兴润, 成国光, 乔通, 鲍道华, 钱张信, 潘吉祥 98

有色冶金

- 响应面法优化草酸-草酸铵协同浸出氰化尾渣中赤铁矿的工艺 党晓娥, 刘安全, 李林波, 张婷 105

节能环保

- 基于钢铁超低排放政策的炼焦工序生命周期评价 杜斌, 李然, 杨花, 林丽娟, 齐增禄 116
低钙钢渣中钙、铁分离及回收利用 赵树海, 金永丽, 郭嘉诚, 张凯璇, 蒋锦韬 125

冶金科技英才

- 曹光明 (133)

冶金科学技术奖

- 长材(棒线材)库区智能化管控关键技术及装备 (134)
难变形金属材料高效轧制技术和装备开发与应用 (135)

征订启事

CONTENTS

Summarization of Technology

Research progress of solid waste treatment in rotary kilns

..... WANG Guangwei, LIU Jiawen, LI Renguo, XU Kun, NING Xiaojun, WANG Chuan 1

Review of Te treatment to control MnS inclusions in steel

..... ZHOU Quanlei, YANG Wen, ZHANG Lifeng 8

Monographic Study

Effect of MgO content on strength of high alumina iron ore pellets

..... LIU Tong, LI Xingwang, ZHANG Junjie, JIA Laihui, LEI Jie, LONG Hongming 17

Main characteristics of high calcium bituminous coal and comprehensive evaluation of blast furnace injection process performance

..... GUO Hao, LI Yanjiang, HU Qichen, SUO Yanshuai, QIAO Junqiang, ZHANG Jianliang 24

Experiment on efficient dephosphorization of small particle limestone after rapid calcination

..... LI Chenxiao, ZHANG Yun, XUE Yuekai, SUN Huakang, ZHANG Kaixuan, MENG Xin, SHEN Haojie 34

Deoxygenated alloying inclusions in Fe-Mn-Al-C low density steel

..... CAO Lei, GUO Yuhang, WANG Guocheng, SHANG Deli 42

Effect of aging treatment process on corrosion resistance of high nitrogen stainless steel for marine engineering

..... LIU Jimeng, LI Hao, WANG Shuhuan, ZHAO Dingguo, NI Guolong 50

Production Technology

Analysis on influencing factors of reduction swelling index of pellets

..... ZHAO Luyao, TIAN Yunqing, ZHAO Manxiang, LIU Changjiang, YU Xiaobo, HAN Yingguang 60

Optimization of flow field in 1 270 mm×150 mm slab mold by dissipative submerged entry nozzle

..... WANG Yang, MA Dangshen, YANG Maosheng, LI Jingshe, YANG Shufeng 65

Research and application of new technology for ultra-deep dephosphorization in large-scale converter

..... LÜ Yanchun, ZHOU Deguang, ZHU Guosen, ZHU Zhiyuan, WANG Guolian, LI Haibo, LIU Yang 73

SmFe₁₂-based permanent magnet master alloy prepared efficiently by vacuum induction melting

..... WANG Wanting, WANG Shuhuan, LIU Kun, ZHANG Yikun 81

Mechanism and control of hydrogen induced breakout in MCCR thin slab continuous casting with high casting speed

..... ZHANG Congcong, LUO Yanzhao, WANG Shengdong, JI Chenxi, DONG Wenliang, WANG Hao 90

Brittle fracture analysis and control of 2507 super duplex stainless steel slab during grinding

..... CHEN Xingrun, CHENG Guoguang, QIAO Tong, BAO Daohua, QIAN Zhangxin, PAN Jixiang 98

Non-ferrous Metallurgy

Process optimization for oxalic acid and ammonium oxalate synergistic leaching of hematite from cyanide tailings by response surface method

..... DANG Xiaoe, LIU Anquan, LI Linbo, ZHANG Ting 105

Energy Saving and Environmental Protection

Life cycle assessment of coking process in context of ultra-low emission policy on iron and steel industry

..... DU Bin, LI Ran, YANG Hua, LIN Lijuan, QI Zenglu 116

Separation and recovery of calcium and iron from low calcium steel slag

..... ZHAO Shuhai, JIN Yongli, GUO Jiacheng, ZHANG Kaixuan, JIANG Jintao 125

Metallurgy Talent

CAO Guang-ming (133)

Metallurgical Science and Technology Award

..... (134)(135)

Subscription Announcement

..... (132)(136)